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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/822,845	04/02/2001	Haruhiko Nagura	23634X	8608

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EXAMINER	
TRAN, HIEN THI	
ART UNIT	**PAPER NUMBER**
1764	

DATE MAILED: 08/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/822,845	NAGURA ET AL.	
	Examiner	Art Unit	
	Hien Tran	1764	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 May 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11 and 21-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11, 21-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 22 and 24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 22, it is unclear as to what structural limitation applicants are attempting to recite, it appears that the claim is redundant and is not further structurally limiting.

In claim 24, it is unclear as to what structural limitation applicants are attempting to recite and where it is disclosed in the specification, what is intended by "... crests and troughs on the inner wall .... wavy form".

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 1-4, 21-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Honma (5,323,608) in view of Retallick (4,576,800).

Honma discloses a catalytic converter comprising:

a tubular member 12 having a wall, the tubular member 12 having an inlet and an outlet;

a carrier 14 contained in the tubular member; the carrier including a series of sheets; the sheet being superposed with each other; and

an engaging plate (16, 40, 60) crossing the sheet and being engaged with the series of sheet.

The apparatus of Honma is substantially the same as that of the instant claims, but fails to disclose the specific structure of the carrier as claimed, e.g. the sheet is folded successively back into a series of sheets and extends transversely between a point and another point on the inner wall.

However, Retallick discloses the conventionality of providing different types of carriers, such as the one having a sheet being folded successively back into a series of sheets extending transversely between one point and another point on the inner wall (Figs. 4-8).

Since the shape of the carrier is not considered to confer patentability to the claim, it would have been obvious to one having ordinary skill in the art to select an appropriate shape for the catalyst carrier, such as the one taught by Retallick in the apparatus of Honma on the basis of its suitability for the intended use as a matter of obvious design choice since such a modification would have involved a mere change in the shape of a component. A change in shape is generally

recognized as being within the level of ordinary skill in the art, absence showing any unexpected results. *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966).

With respect to the newly added claim 25, it appears that the engage plate 16 having teeth 30 and the core 14 is contact with a respective recess in the engaging plate 16 (see, for example, Fig. 3A). Even if not every sheet is in contact with a respective recess of the engaging plate, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the modified apparatus of Honma so that every sheet of the core is in contact with a respective recess of the engaging plate since it would be surely eliminating the undersirable axial movement of the core as required by Honma.

6. Claims 6-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Honma (5,323,608) in view of Retallick (4,576,800) as applied to claims 1-4, 21-25 above and further in view of Hitachi et al (5,177,960) and either DE 3,844,350 or Freund (5,384,100) or Nonnenmann (4,665,051).

Hitachi et al '960 discloses the conventionality of providing different shapes for the carriers, such as the one having corrugated form having flat rack portions (Fig. 1).

DE 3,844,350, Nonnenmann and Freund disclose provision of a catalyst carrier having third and fourth convex portions being partitioned by two cuttings.

It would have been obvious to one having ordinary skill in the art to provide the catalyst carrier in the modified apparatus of Honma with different shapes of corrugations as taught by Hitachi '960 having cuttings as taught by DE 3,844,350 or Freund or Nonnenmann on the basis of its suitability for the intended use as a matter of obvious design choice and for enhancing the

turbulence of the exhaust flowing therethrough, thereby increasing the effectiveness of the catalyst carrier.

7. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Honma (5,323,608) in view of Retallick (4,576,800) as applied to claims 1-4, 21-25 above and further in view of Hitachi et al (5,374,402).

The modified apparatus of Honma is substantially the same as that of the instant claims, but fails to disclose whether the carrier may be folded in S-shape.

However, Hitachi et al '402 discloses the conventionality of providing a catalyst carrier folded in S-shape.

It would have been obvious to one having ordinary skill in the art to alternately fold the carrier in S-shape as taught by Hitachi et al '402 in the modified apparatus of Honma on the basis of its suitability for the intended use as a matter of obvious design choice since such a modification would have involved a mere change in the shape of a component. A change in shape is generally recognized as being within the level of ordinary skill in the art, absence showing any unexpected results. *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966).

Response to Arguments

8. Applicant's arguments filed 5/18/05 have been fully considered but they are not persuasive.

Applicants argue that Honma fails to disclose an engaging plate extending across the respective one of the sheets and engage with the series of the sheets. Such contention is not persuasive as Honma does disclose an engaging plate 16 extending across one of the sheets and engaging with the series of the sheets (see, for example, Figs. 1, 3A, 3B, 4-5).

Applicants argue that the retaining member 16 of Honma is not disclosed as extending across each of the respective sheets as recited in claim 1. Such contention is not persuasive as the language of the instant is not commensurate in scope with such argument, e.g. the instant claim 1 does not recite that the engaging plate extends across each of the respective sheets. In any event, the engaging plate 16 of Honma does extend across each of the sheets (see, for example, Figs. 1, 3A, 3B, 4-5).

Applicants argue that the retaining member 16 does not extend across each of the corrugations. Such contention is not persuasive as the language of the instant claim does not require so.

Applicants argue that there is no need or motivation to use an engaging plate or retaining member 16 as disclosed in Honma to maintain the spacing between the layers since the spacing is maintained by the corrugations as set forth in Retallick and therefore no motivation to combine Retallick with Honma to obtain an engaging plate as recited in instant claim 1. Such contention is not persuasive as Honma uses the engaging plate to prevent the core from moving in the axial direction. The spacings and corrugations are irrelevant matters. The fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge

generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the apparatus of Honma is substantially the same as that of the instant claims, but fails to disclose the specific structure of the carrier as claimed, e.g. the sheet is folded successively back into a series of sheets and extends transversely between a point and another point on the inner wall.

However, Retallick discloses the conventionality of providing different types of carriers, such as the one having a sheet being folded successively back into a series of sheets extending transversely between one point and another point on the inner wall (Figs. 4-8).

Since the shape of the carrier is not considered to confer patentability to the claim, it would have been obvious to one having ordinary skill in the art to select an appropriate shape for the catalyst carrier, such as the one taught by Retallick in the apparatus of Honma on the basis of its suitability for the intended use as a matter of obvious design choice since such a modification would have involved a mere change in the shape of a component. A change in shape is generally recognized as being within the level of ordinary skill in the art, absence showing any unexpected results. *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966).

Applicants argue that all of the secondary references, Hitachi et al, the German '350, Freund '100, Nonnenmann '051 and Hitachi '402 do not disclose provision of a sheet being folded successively back into a series of sheets and an engaging plate extending across the respective one of the sheets. Such contention is not persuasive as Honma and Retallick are relied upon for such teaching.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kanniainen et al, Hitachi et al (5,163,291), Weber et al, and Reck et al are cited for showing state of the art.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hien Tran whose telephone number is (571) 272-1454. The examiner can normally be reached on Tuesday-Friday from 7:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hien Tran

HT

Hien Tran
Primary Examiner
Art Unit 1764